The Goodyear Tire & Rubber Company

Akron, Ohio 44316-0001

(A)

8EHQ-0596-13638

8EHQ-96-13638
INIT 04/26/96

8EHQ-0596-1363

April 23, 1996

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95 APR 26 AM 11:05

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Certified Mail

OPPT Document Processing Center (TS-790)
Attn: Section 8(e) Coordinator
Office of Pollution Prevention and Toxics (OPPT)
U S Environmental Protection Agency
401 M Street S W
Washington, DC 20460

ORIGINAL

Contains No CBI

Dear Ladies/Gentlemen:

Subject: **TSCA Section 8(e) Notice**

This submittal does not contain Confidential Business Information.

The Goodyear Tire & Rubber Company is currently sponsoring a study at Springborn Laboratories, Inc. in Wareham, MA to examine the toxic potential of a rubber antioxidant in freshwater green alga, Selenastrum capricornutum. The identity of the test material is as follows:

Chemical Abstract Name: 1,4- Benzenediamine, N, N' - mixed Ph and Tolyl derivs.

Chemical Abstract Number: 68953-84-4*

Results from this study were recently communicated to Goodyear by the study director. The findings indicated an inhibition of biomass growth at all concentrations that may represent a substantial risk. Consequently, under the requirements of TSCA Section 8(e), The Goodyear Tire & Rubber Company is providing the EPA with the attached summary of Springborn Laboratories, Inc. report (dated April 15, 1996).

In this study, the test chemical was administered in the culture media to alga for a period of 72 hours. The test chemical levels were measured in culture media and shown to range from 0.0074 mg/L to 0.077 mg/L. Cell counts were performed at 0, 24, 28, and 72 hours following initiation of the study. Rates of alga growth (or inhibition) and culture density were reported.

The results indicated that the test chemical inhibited growth of biomass at all levels. The EC_{50} (based upon biomass increase inhibition) for 72 hours was calculated to be 0.017 mg/L. The EC_{50} for growth rate reduction was estimated to be > 0.077 mg/L.

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7/11/96

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Because these findings are not yet reported in final form, it is not possible at this time to assign any significance to the results. However, upon completion, this report will be forwarded to EPA.

My address and telephone number are as follows:

The Goodyear Tire & Rubber Company
Department 100D
1144 E. Market Street
Akron, OH 44316-0001
Telephone Number: (330) 796-2362

Sincerely,

Michael W. Smith
Section Manager, Chemical Information
Systems & Regulatory Affairs

MWS/jh
s6m4a23
Attachment (1)

SUMMARY

Wingstay® 100 - Toxicity to the Freshwater Green Alga, *Selenastrum capricornutum*

SPONSOR:	The Goodyear Tire & Rubber Company
PROTOCOL TITLE:	"Wingstay® 100 - Acute Toxicity Test to the Freshwater Green Alga, *Selenastrum capricornutum*, Following OECD Guideline #201 and EC Guideline L383A - C.3", Springborn Laboratories Protocol #:062095/OECD/EC/430/Wingstay 100 and Protocol Amendment #1 dated 15 February 1996.
REPORT NUMBER:	96-4-6454
STUDY NUMBER:	13537.1095.6124.430
TEST SUBSTANCE:	Wingstay® 100, Lot No. 137170393 NP1017, CAS Registry No. 68953-84-4, a gray, flaky substance, was received from Goodyear Research on 7 September 1994. Wingstay® 100 was tested on a whole product basis.
TEST DATES:	18-21 March 1996
TEST ORGANISM:	*Selenastrum capricornutum*, inoculum - 3 days since previous transfer, source - Springborn Laboratories' culture
DILUTION WATER:	Algal Assay Procedure (AAP) medium
TEST CONDITIONS:	72-hour duration, 24 °C, continuous illumination at 3900 to 4500 lux (360 to 420 footcandles), shaking at 100 rpm
NOMINAL TEST CONCENTRATIONS:	0.016, 0.031, 0.063, 0.13, 0.25 and 0.50 mg/L
MEAN MEASURED CONCENTRATIONS:	0.0074, 0.013, 0.014, 0.027, 0.049 and 0.077 mg/L
EFFECT CRITERION:	Inhibition of biomass (area under the growth curve) and average growth rate (μ_{ave}) relative to the performance of the solvent control

RESULTS:

Based on biomass, the 0- to 72-hour E_bC50 value was calculated to be 0.017 mg/L (corresponding 95% confidence limits of 0.0085 to 0.035 mg/L). Since a statistically significant effect on biomass was observed at all treatment levels tested, the E_bC10 value was calculated to provide a conservative estimate of the 96-hour NOEC value. The 72-hour E_bC10 for biomass was determined to be 0.0044 mg/L (95% confidence limits of 0.0018 to 0.0094 mg/L).

Based on average growth rate (μ_{ave}), the 0- to 72-hour E_rC50 was empirically estimated to be >0.077 mg/L, the highest concentration tested. A 38% reduction in growth rate was observed in the 0.077 mg/L solution. The 72-hour NOEC for μ_{ave} for this study was determined to be 0.013 mg/L.

Triage of 8(e) Submissions

Date sent to triage:_____ (NON-CAP) CAP

Submission number: 13638 TSCA Inventory: (Y) N D

Study type (circle appropriate):

Group 1 - Gordon Cash (1 copy total)

(ECO) AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX SBTOX SEN w/NEUR

Group 3 -HERD (1 copy each)

STOX	CTOX	EPI	RTOX	GTOX
STOX/ONCO	CTOX/ONCO	IMMUNO	CYTO	NEUR

Other (FATE, EXPO, MET, etc.):_____

Notes:

☑ This is the **original** 8(e) submission; refile after triage evaluation.

☐ This **original** submission has been **split**; rejoin after triage evaluation.

☐ Other:

Photocopies Needed for Triage Evaluation

entire document: 0 1 2 3

front section and CECATS: 0 1 2 3

Initials:_____ **Date:**_____

CECATS\TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA:
Submission # 8EHQ-0596-13638 SEQ. A

TYPE: (INT.) SUPP FLWP

SUBMITTER NAME: [redacted] Goodyear Tire & Rubber Company

SUB. DATE: 04/23/96 OTS DATE: 04/26/96 CSRAD DATE: 07/11/96

INFORMATION REQUESTED: FLWP DATE:
0501 NO INFO REQUESTED
0502 INFO REQUESTED (TECH)
0503 INFO REQUESTED (VOL ACTIONS)
0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:
(0639) REFER TO CHEMICAL SCREENING
0678 CAP NOTICE

VOLUNTARY ACTIONS:
(0401) NO ACTION REPORTED
0402 STUDIES PLANNED/UNDERWAY
0403 NOTIFICATION OF WORKERS/OTHERS
0404 LABEL/MSDS CHANGES
0405 PROCESS/HANDLING CHANGES
0406 APP./USE DISCONTINUED
0407 PRODUCTION DISCONTINUED
0408 CONFIDENTIAL

CHEMICAL NAME:

Misc. chemicals
Wingstay 100

CAS#

68953-84-4
~~none~~
"

INFORMATION TYPE:		P F C	INFORMATION TYPE:		P F C	INFORMATION TYPE:		P F C
0201	ONCO (HUMAN)	01 02 04	0216	EPI/CLIN	01 02 04	0241	IMMUNO (ANIMAL)	01 02 04
0202	ONCO (ANIMAL)	01 02 04	0217	HUMAN EXPOS (PROD CONTAM)	01 02 04	0242	IMMUNO (HUMAN)	01 02 04
0203	CELL TRANS (IN VITRO)	01 02 04	0218	HUMAN EXPOS (ACCIDENTAL)	01 02 04	(0243)	CHEM/PHYS PROP	01 02 04
0204	MUTA (IN VITRO)	01 02 04	0219	HUMAN EXPOS (MONITORING)	01 02 04	0244	CLASTO (IN VITRO)	01 02 04
0205	MUTA (IN VIVO)	01 02 04	(0220)	ECO/AQUA TOX	(0) 02 04	0245	CLASTO (ANIMAL)	01 02 04
0206	REPRO/TERATO (HUMAN)	01 02 04	0221	ENV. OCCC/REL/FATE	01 02 04	0246	CLASTO (HUMAN)	01 02 04
0207	REPRO/TERATO (ANIMAL)	01 02 04	0222	EMER INCI OF ENV CONTAM	01 02 04	0247	DNA DAM/REPAIR	01 02 04
0208	NEURO (HUMAN)	01 02 04	0223	RESPONSE REQEST DELAY	01 02 04	(0248)	PROD/USE/PROC	01 02 04
0209	NEURO (ANIMAL)	01 02 04	(0224)	PROD/COMP/CHEM ID	01 02 04	0251	MSDS	01 02 04
0210	ACUTE TOX. (HUMAN)	01 02 04	0225	REPORTING RATIONALE	01 02 04	0299	OTHER	01 02 04
0211	CHR. TOX. (HUMAN)	01 02 04	0226	CONFIDENTIAL	01 02 04			
0212	ACUTE TOX. (ANIMAL)	01 02 04	0227	ALLERG (HUMAN)	01 02 04			
0213	SUB ACUTE TOX (ANIMAL)	01 02 04	0228	ALLERG (ANIMAL)	01 02 04			
0214	SUB CHRONIC TOX (ANIMAL)	01 02 04	0239	METAB/PHARMACO (ANIMAL)	01 02 04			
0215	CHRONIC TOX (ANIMAL)	01 02 04	0240	METAB/PHARMACO (HUMAN)	01 02 04			

TRIAGE DATA:	NON-CBI INVENTORY	ONGOING REVIEW	SPECIES	TOXICOLOGICAL CONCERN:	USE:	PRODUCTION:
	(YES)	YES (DROP/REFER)	Algae	LOW	rubber antioxidant	
CAS SR	NO	NO (CONTINUE)		MED		
	UNKNOWN	REFER		HIGH		

COMMENTS

Tox Concern

ID
13638A

ECO

H

COMMENT
AQUATIC TOXICITY TO GREEN ALGAE, S. CAPRICORNUTUM, IS OF HIGH CONCERN WITH A 72 HOUR EC50 OF 0.0170 MG/L. (EFFECT-BIOMASS). THE GROWTH RATE EC50 IS GREATER THAN 0.077 MG/L. (SOLID)